

INTERNATIONAL SEARCH REPORT

International Application No

PCT/SG 03/00211

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A63B57/00 A63B69/36

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 414 268 A (CHASE) 3 December 1968 (1968-12-03) the whole document	1,3-6,17
A	---	15
X	JP 51 068330 A (MORISHITA JUICHI) 12 June 1976 (1976-06-12) figures	1,7,12, 13,15-17
X	GB 29794 A A.D. 1913 (STOTT) 25 June 1914 (1914-06-25)	11-15, 17,18
Y	page 3, line 35 -page 4, line 37; figures 1-10	19,20
Y	US 5 613 678 A (MCKEE ET AL.) 25 March 1997 (1997-03-25)	19,20
A	column 15, line 13 -column 17, line 44; figures 18-21B	11
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *G* document member of the same patent family

Date of the actual completion of the international search

28 May 2004

Date of mailing of the international search report

04/06/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Williams, M

INTERNATIONAL SEARCH REPORT

International Application No
PCT/SG 03/00211

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 645 208 A (MORABETO) 24 February 1987 (1987-02-24) the whole document ----	1,3-8,18
A	WO 94/15679 A (BINNEY ET AL.) 21 July 1994 (1994-07-21) the whole document ----	1-4,6,7
A	US 3 966 214 A (COLLINS) 29 June 1976 (1976-06-29) the whole document ----	1-6
A	FR 781 287 A (HELLEU) 11 May 1935 (1935-05-11) page 2, line 27 - line 99; figures 1-9 ----	1-4
A	DE 200 14 825 U (OPDEMOM) 23 November 2000 (2000-11-23) the whole document ----	1-4
A	US 1 623 119 A (KEARNEY) 5 April 1927 (1927-04-05) page 1, line 95 -page 2, line 16; figures 7-10 ----	1,3-7, 11,18,21
A	US 4 998 732 A (GALLANT) 12 March 1991 (1991-03-12) column 2, line 11 - line 34; figures 1-8 ----	1,7-9
A	GB 236 132 A (LOYD) 2 July 1925 (1925-07-02) the whole document ----	1,7,13, 15,17
A	US 2 573 107 A (MORGAN) 30 October 1951 (1951-10-30) -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/SG 03/00211

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3414268	A	03-12-1968	NONE	
JP 51068330	A	12-06-1976	NONE	
GB 191329794	A		NONE	
US 5613678	A	25-03-1997	AU 6954596 A CA 2229804 A1 WO 9706863 A1	12-03-1997 27-02-1997 27-02-1997
US 4645208	A	24-02-1987	NONE	
WO 9415679	A	21-07-1994	WO 9415679 A1 AU 3260793 A	21-07-1994 15-08-1994
US 3966214	A	29-06-1976	NONE	
FR 781287	A	11-05-1935	NONE	
DE 20014825	U	23-11-2000	DE 20014825 U1	23-11-2000
US 1623119	A	05-04-1927	NONE	
US 4998732	A	12-03-1991	NONE	
GB 236132	A	02-07-1925	NONE	
US 2573107	A	30-10-1951	NONE	